



Evaluating The Effectiveness Of Planned Teaching Programme On Cardiopulmonary Resuscitation (Compression Only Life Support) Among Selected Higher Secondary School Students In Selected Rural Areas Of Vadodara District.

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ABSTRACT

Background: Breastfeeding is an important component of maternal and child health. Adequate knowledge regarding breastfeeding is essential for primi mothers to initiate and practice breastfeeding appropriately. First-time mothers may require structured education regarding breastfeeding techniques, positioning, attachment and its benefits.

Need of the Study: The need for the present study was identified because inadequate knowledge among mothers may contribute to inappropriate breastfeeding practices. The literature reviewed in the project indicates gaps in mothers' knowledge regarding exclusive breastfeeding, early initiation, positioning, attachment and breastfeeding techniques.

Aim: The present study aimed to assess the effectiveness of a planned teaching programme on knowledge regarding breastfeeding among primi mothers in a selected urban area of Vadodara City.

Materials and Methods: A quantitative evaluative approach with a pre-experimental one-group pre-test and post-test design was adopted. Samples were selected using a non-probability convenience sampling technique. Data were collected using a structured knowledge questionnaire regarding breastfeeding. A planned teaching programme was administered after the pre-test, followed by a post-test to assess the change in knowledge. Descriptive and inferential statistics were used for data analysis.

Results: In the pre-test, 15 (50%) participants had poor knowledge and 15 (50%) had average knowledge, while none had good knowledge. Following the planned teaching programme, 21 (70%) participants had average knowledge and 9 (30%) had good knowledge. The mean pre-test knowledge score was 7.93 ± 2.66 , whereas the mean post-test score increased to 13.43 ± 2.16 , showing a mean difference of 5.5. The reported paired t value was 21.79 with 29 degrees of freedom, indicating a statistically significant improvement in knowledge.

Conclusion: The findings indicate that the planned teaching programme was effective in improving knowledge regarding breastfeeding among primi mothers in the selected urban area of Vadodara City.

KEYWORDS

Breastfeeding; Primi mothers; Planned teaching programme; Nursing education.

INTRODUCTION

Cardiopulmonary resuscitation (CPR) is a lifesaving emergency procedure used to maintain circulation and oxygenation when cardiac or respiratory function has stopped. Immediate CPR is important because cardiac arrest can cause loss of consciousness and death within minutes if resuscitative efforts are delayed. Bystander CPR forms an essential link in the chain of survival, particularly in situations where professional emergency services may take longer to arrive. This concern is especially relevant in rural areas, where healthcare facilities and emergency medical services may be less accessible.

Higher secondary school students are an important group for CPR education because they can learn, retain, and apply basic lifesaving knowledge during emergencies. However, inadequate awareness and limited formal CPR training may delay appropriate action. Therefore, the present study was undertaken to evaluate the effectiveness of a planned teaching programme on compression-only life support among higher secondary school students in selected rural areas of Vadodara district.

THE PROBLEM STATEMENT:

“A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Cardiopulmonary Resuscitation (Compression Only Life Support) Among Selected Higher Secondary School Students in Selected Rural Areas of Vadodara District.” The objectives were to assess the pre-test knowledge level regarding cardiopulmonary resuscitation among higher secondary school students, to conduct a planned teaching programme regarding cardiopulmonary resuscitation (compression only life support), to determine the difference between pre-test and post-test knowledge scores, and to determine the association between pre-test knowledge scores and selected demographic variables.

MATERIAL AND METHODS

A quantitative evaluative approach was adopted. The research design was a quasi-experimental one-group pre-test and post-test design. The study was conducted among higher secondary school students in selected rural areas of Vadodara District (Waghodia). The target population consisted of higher secondary school children, and a sample of 100 higher secondary school students was selected using a non-probability convenience sampling technique. The inclusion criteria included higher secondary school children who could read, write and understand Gujarati or English. Students of Standard 9 and 10 and those who were not available at the time of data collection were excluded from the study. Data were collected using a self-administered, self-structured questionnaire. The tool consisted of two sections: Section A included socio-demographic data such as age, sex, father's education, mother's education, type of family, religion, previous knowledge regarding CPR and source of information; Section B consisted of 20 self-administered questions regarding knowledge of CPR.

The content validity of the tool was established in consultation with five nursing experts. Reliability of the structured knowledge questionnaire was assessed using Karl Pearson's correlation formula among 10 higher secondary school children in Hanumanpura, and the reliability coefficient was found to be 0.966, indicating that the questionnaire was reliable. A pilot study was conducted among 10 students of Standard 11 and 12 in rural Hanumanpura to assess the feasibility of the study.

Data collection was carried out in four stages: selection of samples, administration of the pre-test using the self-structured questionnaire, administration of the planned teaching programme on CPR, and administration of the post-test to assess improvement in knowledge.

Descriptive statistics including mean and standard deviation were used to assess knowledge regarding CPR. A paired t-test was used to determine the difference between pre-test and post-test

knowledge scores, and the chi-square test was used to determine the association between pre-test knowledge scores and selected demographic variables.

RESULTS

A total of 100 higher secondary school students participated in the study. Regarding age, 26 (26%) students were 15–16 years, 52 (52%) were 17–18 years, and 22 (22%) were 19–20 years old, while none were above 21 years. Regarding gender, 56 (56%) were male and 44 (44%) were female. Fifty (50%) students were studying in the 11th standard and 50 (50%) in the 12th standard. Most students belonged to nuclear families (65; 65%), while 35 (35%) belonged to joint families. Regarding father's education, 28 (28%) had completed 10th standard, 44 (44%) had completed 12th standard, 18 (18%) were graduates and 10 (10%) belonged to other categories. Regarding mother's education, 53 (53%) had completed 10th standard, 21 (21%) had completed 12th standard, 3 (3%) were graduates and 23 (23%) belonged to other categories. Previous knowledge regarding CPR was reported by 43 (43%) students, whereas 57 (57%) had no previous knowledge..

Table 1: comparison of pre-test and post-test knowledge levels among study participants

Knowledge level	Pre-test n (%)	Post-test n (%)	Pre-test mean $\pm$ SD	Post-test mean $\pm$ SD
Good	16 (16%)	29 (29%)	7.13 $\pm$ 5.12	11.69 $\pm$ 3.97
Average	21 (21%)	61 (61%)		
Poor	16 (16%)	29 (29%)		
Total	100 (100%)	30 (100%)		

The pre-test showed that 63 (63%) students had poor knowledge, 21 (21%) had average knowledge and 16 (16%) had good knowledge. After the structured teaching programme, 61 (61%) students had average knowledge, 29 (29%) had good knowledge and only 10 (10%) remained in the poor-knowledge category. The mean pre-test knowledge score was 7.13 ± 5.12 , while the mean post-test knowledge score increased to 11.69 ± 3.97 , with a mean difference of 4.56. The calculated paired t-value was 7.04 with 99 degrees of freedom, which was statistically significant at the 0.05 level. These findings indicate that the structured teaching programme was effective in improving knowledge regarding CPR among higher secondary school students.

For the association between pre-test knowledge and selected demographic variables, age ($\chi^2 = 12.19$), father's education ($\chi^2 = 14.31$), and mother's education ($\chi^2 = 34.45$) showed a statistically significant association with pre-test knowledge at $p < 0.05$. Gender, class, type of family and previous knowledge regarding CPR were not significantly associated with pre-test knowledge.

DISCUSSION

The present study demonstrated an improvement in cardiopulmonary resuscitation (CPR) knowledge following the planned teaching programme. Before the intervention, 63% of the higher secondary school students had poor knowledge, 21% had average knowledge and 16% had good knowledge. After the intervention, the poor-knowledge category was reduced to 10%, while 61% of students had average knowledge and 29% had good knowledge. This pattern indicates a favourable improvement in the distribution of CPR knowledge following exposure to the planned teaching programme.

The increase in the mean knowledge score from 7.13 ± 5.12 in the pre-test to 11.69 ± 3.97 in the post-test, with a mean gain of 4.56 marks, further supports the effectiveness of the intervention. The calculated paired t-test value was 7.04 with 99 degrees of freedom, which was statistically significant at the 0.05 level. Thus, the findings support the primary objective of determining the difference between pre-test and post-test knowledge scores and indicate that the structured teaching programme was effective in improving CPR knowledge among higher secondary school students.

The intervention focused on providing structured information regarding cardiopulmonary resuscitation and compression-only life support. The study used a self-structured questionnaire to assess knowledge before and after the planned teaching programme. The educational intervention was followed by a post-test to determine improvement in students' knowledge.

The study further examined the association between pre-test knowledge scores and selected demographic variables. Age, father's education and mother's education showed a statistically significant association with pre-test knowledge at $p < 0.05$. In contrast, gender, class, type of family and previous knowledge regarding CPR were not significantly associated with pre-test knowledge. These findings suggest that certain demographic characteristics, particularly age and parental educational status, may be related to the baseline CPR knowledge of higher secondary school students.

CONCLUSION

The study identified a knowledge deficit regarding cardiopulmonary resuscitation among higher secondary school students in selected rural areas of Vadodara District. The planned teaching programme was associated with a clear improvement in CPR knowledge. The mean knowledge score increased from 7.13 ± 5.12 in the pre-test to 11.69 ± 3.97 in the post-test, with a mean difference of 4.56 . The post-test distribution also showed that the proportion of students with poor knowledge decreased from **63% to 10%**, while **29%** achieved good knowledge compared with 16% in the pre-test. Based on the findings reported in the study, the planned teaching programme was effective in enhancing knowledge regarding cardiopulmonary resuscitation among higher secondary school students. The study supports the use of structured and systematic CPR health education to improve students' preparedness to respond during cardiac emergencies. The original study similarly concluded that a knowledge deficit existed and that the planned teaching programme was effective in enhancing CPR knowledge among higher secondary school students.

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